

## IN THE CLAIMS:

### Claims 1-2 (cancelled)

3. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the sulfur-oxidated compounds are selected from the group consisting of sulfoxides and sulfones.
4. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the adsorbent is selected from the group consisting essentially of activated charcoal, hydrotalcite, ion exchange resin, zeolites, silica-alumina, and silica gel.
5. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the adsorbent having adsorbed sulfur-oxidated compounds contains from about 0.2 to about 2 weight percent sulfur-oxidated compounds.
6. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the contacting in step (a) is conducted at a temperature from about 25°C (77°F) to about 125°C (257°F) and a pressure from about 1240 kPa (165 psig) to about 1825 kPa (250 psig).
7. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the desorbent in step ~~(b)~~ (c) is introduced at a temperature from about 43°C (110°F) to about 125°C (257°F).
8. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the desorbent comprises pentane, hexane, benzene, toluene, or xylene.

### Claims 9-10 (cancelled)

11. (currently amended) The process of claim ~~[[1]]~~ 27 wherein the hydrocarbonaceous stream comprises diesel boiling range hydrocarbons.

### Claims 12-22 (cancelled)

23. (currently amended) The process of claim ~~[[12]]~~ 27 wherein the purge stream boils in a temperature range lower than that of the desorbent.
24. (currently amended) The process of claim ~~[[12]]~~ 27 wherein the purge stream comprises pentane or hexane.

### Claims 25-26 (cancelled)

27. (currently amended) A process for the removal of sulfur-oxidated compounds from a hydrocarbonaceous stream containing sulfur-oxidated compounds wherein the process comprises:

- (a) contacting a hydrocarbonaceous stream containing sulfur-oxidated compounds and boiling in the range from about 149°C (300°F) to about 538°C (1000°F) with an adsorbent which selectively adsorbs sulfur-oxidated compounds to produce an adsorbent having adsorbed sulfur-oxidated compounds;
- (b) contacting the adsorbent having adsorbed sulfur-oxidated compounds with a purge stream to displace interstitial hydrocarbons having a reduced concentration of sulfur-oxidated compounds;
- (c) contacting the adsorbent having adsorbed sulfur-oxidated compounds from step (b) with a desorbent to produce a desorbent containing sulfur-oxidated compounds and an adsorbent having a reduced content of sulfur-oxidated compounds;
- (d) contacting the adsorbent from step (c) with a hydrocarbonaceous stream containing sulfur-oxidated compounds and boiling in the range from about 149°C (300°F) to about 538°C (1000°F);
- (e) fractionating the desorbent containing sulfur-oxidated compounds from step (c) in a split shell fractionation zone to recover a desorbent having a reduced concentration of sulfur-oxidated compounds;
- (f) fractionating the purge stream from step (b) in the split shell fractionation zone to recover a purge liquid having a reduced concentration of interstitial hydrocarbons; [[and]]
- (g) ~~recovering a hydrocarbonaceous stream containing a reduced concentration of sulfur-oxidated compounds.~~ recycling at least a portion of the desorbent having a reduced concentration of sulfur-oxidated compounds recovered in step (e) to step (c); and
- (h) recycling at least a portion of the purge liquid having a reduced concentration of interstitial hydrocarbons recovered in step (f) to step (b);
- (i) recovering a hydrocarbonaceous stream containing a reduced concentration of sulfur-oxidated compounds.